

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/526,403	WHITEHEAD ET AL.	
	Examiner David S. Baker	Art Unit 2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 15 November 2007.

2.  The allowed claim(s) is/are 26-47 and 49.

3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some\*    c)  None    of the:

1.  Certified copies of the priority documents have been received.

2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

(a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.

(b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____.   | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Amendment filed 15 November 2007 has been accepted and entered.
2. The finality of the last Office action is withdrawn.

### ***Allowable Subject Matter***

3. Claims 26-47 and 49 are allowed.
4. The following is an examiner's statement of reasons for allowance:

Regarding claim 26, the prior art of reference does not disclose or make obvious, along with the other limitations, a method of detecting radiation comprising: namely, providing a layer of high purity single crystal CVD diamond having at least one of the properties named in parts (i)-(v) of the instant claimed.

Regarding claims 27-46, the balance of claims is found allowable due to their dependence upon an already allowed claim and lacking any technical errors.

Regarding claim 47, the prior art of reference does not disclose or make obvious, along with the other limitations, a detector including a stand-alone, remote or hand-held device comprising: namely, a layer of high purity single crystal CVD diamond having at least one of the properties named in parts (i)-(v) of the instant claimed.

Regarding claim 49, the balance of claims is found allowable due to their dependence upon an already allowed claim and lacking any technical errors.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

5. Applicant's arguments, see pages 2-4 of the amendment, filed 15 November 2007, with respect to claims 26 and 47 have been fully considered and are persuasive. The rejection of claims 26-27 and 49 has been withdrawn.

While the use of single crystal diamond is well known in the art for use in particle detection, a high purity layer of single crystal CVD has not been disclosed or made obvious that is so pure as to have the properties required by the instant application.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5,216,249 A – Jones discloses a single and polycrystalline diamond detector.

US 4,465,932 A – Burgemeister discloses a diamond detector.

US 4,266,138 A – Nelson discloses a IIb high purity diamond detector.

US 2007/0148079 A1 – Scarsbrook discloses a diamond detector with similar properties but does not qualify as prior art.

US 2004/0182308 A1 – Scarsbrook discloses a diamond detector with similar properties but does not qualify as prior art.

US 2004/0221795 A1 – Scarsbrook discloses a diamond detector with similar properties but does not qualify as prior art.

US 5,210,430 A – Taniguchi discloses a diamond detector.

High Carrier... - Isberg discloses the claimed invention but does not qualify as prior art.

A Neutron Sensor... - Schmid discloses a single crystal diamond with inferior qualities.

High-Voltage... - Twitchen discloses a single crystal diamond with inferior qualities.

Charge Collection... - Isberg discloses a single crystal diamond with equivalent  $\mu\tau$  properties but does not qualify as prior art.

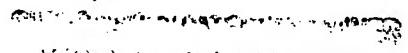
Charge Carrier... - Pernegger discloses a single crystal diamond with inferior qualities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Baker whose telephone number is (571) 272-6003. The examiner can normally be reached on MTWRF 9:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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